## PART IV. REGULATIONS FOR ADJACENT UPLAND RESOURCE AREAS

### 4.01 Adjacent Upland Resource Areas

(1) Preamble

Adjacent upland resource areas are presumed to be important to the protection of wetland values because activities undertaken in close proximity to wetlands and other resources areas are likely to have adverse impact, either immediately as a consequence of construction, or over time, as a consequence of daily use and operation of the proposed project. The adverse impact from construction and use can include, without limitation, erosion, siltation, loss of groundwater recharge, poor water quality (due to surface runoff carrying heavy metals such as lead, cadmium, copper & zinc, hydrocarbons such as gasoline and motor oil, pesticides, herbicides, bacteria, viruses), nutrient loading resulting from overuse or improper use of fertilizers, septic effluent, harm to wildlife habitat, introduction of invasive and exotic species, and reduced populations of wetland-dependent species. The area immediately upland of the wetland boundary is important as a seed reservoir, as habitat for aquatic and wetland-dependent wildlife species, and as a refuge to wildlife during periods of high water (Brown and Schaefer, 1987).

A growing body of research evidence suggests that even “no disturb” areas reaching 100 feet from wetlands may be insufficient to protect many important wetland resource characteristics and values. Problems of nutrient run-off, water pollution, siltation, erosion, removal of naturalized vegetative cover, and habitat loss are greatly exacerbated by activities within 100 feet of wetlands. Vegetated buffer strips (VBS) control soil erosion and filter or absorb many of the pollutants (Shisler, et. al., 1987). Soluble nutrients and pollutants are also removed or transformed by the soils, bacteria and plants within the VBS (EPA, 1988). Wetland buffers are important in moderating water level fluctuations as vegetation impedes the flow of runoff and allows it to percolate into the ground, yielding the water to the wetland over an extended period of time (Dunne, 1978).

A VBS of continuous undisturbed naturalized cover located between a development activity and the wetland resource area is often critical to the protection of the environmental values protected by the Bylaw. The buffering effectiveness of a VBS increases with the depth of the naturalized vegetation. In cases where a VBS does not exist or is limited, it may be deemed necessary to provide or enhance a VBS as mitigation in order to preclude adverse impact from past, present or possible future activities on the adjacent upland resource area and the abutting wetland resource.

Thus, in general, work and activity on land within 100 feet of wetlands should be avoided and discouraged and reasonable alternatives pursued. Under the Bylaw, an adjacent upland resource area is a protected resource area, and accordingly the commission shall begin with the presumption that lands within the

adjacent upland resource area are best left in an undisturbed and natural state. Therefore, wherever possible, alteration, specifically permanent alteration of the adjacent upland resource area, should be avoided and projects that will cause permanent alteration, such as a structure, should be sited as far from the wetland resource boundary as possible.

The Commission may however designate areas of an adjacent upland resource area on a specific site to be suitable for temporary, limited, or permanent disturbance, provided that the applicant can demonstrate to the Commission's satisfaction that the proposed work or activity will not affect wetland values singularly or cumulatively or that reasonable alternatives to the proposed work or activity do not exist and that mitigation is proposed that contributes to the wetland values to be protected.

For projects that are permitted within an adjacent upland resource area, the quantity and quality of resource values and function to be protected shall be considered explicitly in placing conditions on the proposed work. In some instances, minimal restrictions may be all that is necessary, for example, to protect against erosion. In other cases where there are multiple functions to be protected, greater protection and restrictions may be necessary. For example, greater protection would be required if rare or endangered species were found at the site.

Adjacent upland areas around wetland resources often play an important role in determining and maintaining wildlife habitat values of the wetlands. Such habitat serves a variety of critically important functions in support of wildlife, providing food, water, breeding space, shelter, security, movement and migration space, and connections to other habitat areas. All of these wildlife habitat functions are presumed to exist in all resource areas. Configuration of undisturbed areas within an adjacent upland resource area may equally affect the habitat values depending on site specific topographical and ecological features, (e.g.) tree canopy, snags. The Commission will give special attention to features inside a "no-disturb" area which it deems important in supporting the wildlife habitat value of the resource and may require that the applicant maintain a strip of continuous, undisturbed vegetative cover consisting of indigenous plant species in part or all of the 100 foot area. The Commission may also set other conditions on this area, unless the applicant provides evidence deemed sufficient by the commission that the area or part of it may be disturbed without harm to the values protected by the law.

(2) Definitions

(a) "Adjacent Upland Resource" area means the upland within 100 feet of any freshwater wetland, coastal wetland, marsh, wet meadow, bog, vernal pool or swamp, bank, beach, dune or flat, any lake, river, pond, stream, estuary, watercourse or the ocean, land subject to flooding or inundation by groundwater, surface water, tidal action or land subject

to coastal storm flowage as referred to in section 37005 of the bylaw. It shall also mean the land within 200 feet of a perennial stream or river.

(b) "Vegetated Buffer Strip" means a strip of densely vegetated land lying between human activity and the boundary of a wetland resource area which may serve to provide the following benefits during construction and following development; these benefits are, without limitations, wildlife habitat, prevention of erosion and sedimentation, the filtering and absorption of pollutants and excess nutrients, water recharge capability.

(c) "No Disturb Zone" means that part of an adjacent upland resource area that extends 50 feet landward from an abutting resource area and which is designated by the Commission to be an area where no substantial activity, other than the maintenance of an already existing structure, which will result in the building within or upon, filling, removing, dredging, or altering of land, shall be permitted by the Commission, except for that which is allowed under a Conservation Variance.

(3) Performance Standards for Adjacent Upland Resource areas

(a) Site Characteristics

In considering the permitting of proposed activities within adjacent upland resource areas, the Commission shall consider the following:

1. the quality and quantity of the wetland functions and values to be protected; and

2. the physical characteristics of the adjacent upland resource area including, but not limited to slope, soils, drainage, groundwater flow and depth of groundwater, vegetation composition and depth of the VBS, connectivity to other naturalized areas on adjacent parcels; and

3. the presence or evidence of likely habitat of rare or endangered species – both plant and animal, regardless of designation by the Department of Fish and Game Natural Heritage & Endangered Species Program (NHESP). The Commission may consult with the NHESP or other authorities as it deems necessary for guidance and recommendations.

(b) Vegetated Buffer Strip (VBS)

A vegetated buffer strip of continuous undisturbed naturalized vegetative cover that is located within an adjacent upland resource area, typically lying between a proposed development activity and a wetland resource area, is critical to the protection of the environmental values and public interests protected by this Bylaw. In such areas that are required by the Commission to be a VBS, the following standards are applicable:

1. turf lawn shall not constitute part of the VBS,

2. the introduction of exotic or invasive species shall be prohibited,

3. the connectivity with other naturalized areas shall be preserved, enhanced or created as is practicable,

4. wherever possible within the adjacent upland resource area, trees shall be allowed to remain. Tree removal may be permitted for the following reasons:

   (a) location and/or health pose a safety concern and threaten property or public safety;

   (b) species is deemed a harmful exotic invasive (eg) Tree of Heaven (*Ailanthus altissima*);

   (c) thinning or culling, as a best management practice to improve viability of other trees or other important vegetation;

   (d) recommendation by a certified arborist for reasons of disease, decay, structural failure, or presence of invasive insect species;

   (e) mitigation deemed adequate by the Commission is proposed (see policy # 04-101).

(c) Protection of Wildlife Habitat

In order to protect the adjacent upland resource area in accordance with the fundamental purpose of the Bylaw, a project must be designed to avoid adverse impact on wildlife habitat – either project specific or cumulative – for more than two growing seasons. Therefore any activity, which is allowed in the adjacent upland resource area shall not have an adverse impact on wildlife habitat caused by:

1. disturbance or removal of vegetation providing cover, food source, breeding or nesting sites without mitigation;

2. creating a barrier to wildlife movement within and between resource areas through the placement of fencing or other obstruction;

3. destruction of habitat features including, but not limited to large cavity trees (except as permitted under 4.01(3)(b)4 above), turtle nesting areas, existing nest trees for birds that reuse nests, dens, burrows, vernal pools, vertical sandy banks, migration corridors that provide connectivity between wildlife habitats;

4. indirect impacts of human activities near wildlife habitat; including, but not limited to, limiting work or recreational activity within 100 feet of an active den, or within 200 feet of an existing osprey, great blue heron, bird of prey, or rare or endangered species nest;

5. cumulative impacts which under reasonable assumption could result in a measurable decrease in the existing wildlife populations or biological structure, composition, or richness on the site or in the vicinity, taking into account the potential impact of future projects that could be proposed in the vicinity which could have similar detrimental or negative synergistic effect on wildlife habitat.

(d) No Disturb Zone

The purpose of the no disturb zone is to give greater protection to the resource's environmental interests by preserving and improving water quality, reducing pollution and erosion, and by providing wildlife habitat and corridors.

In such areas as are designated or required by the Commission to be a no-touch area, no activity, other than maintenance of an already existing structure and actively maintained landscaping, which will result in the building within or upon, filling, or altering land within 50 feet of a coastal or inland wetland area shall be permitted by the Commission, except for an activity which is allowed under a variance from these regulations pursuant to section 4.03.

Notwithstanding that an area is designated by the Commission to be a no-disturb zone, the following alterations may be permitted:

1. pervious walking paths to a width of no more than 4ft to provide access;

2. elevated stairs or at-grade steps;

3. pruning or selective cutting of vegetation for windows of view or invasive species or noxious plant control;

4. water dependent projects, if no practicable alternative is available, (such a project shall be designed and conditioned to minimize any adverse impacts on the protected environmental interests);

5. fertilizer use for new plantings based on best management practices;

6. use of IPM (Integrated Pest Management) based on best management practices;

7. herbicide use at the discretion of the Commission;

8. fences that are not a hindrance to wildlife movement;

9. conversion of impervious surfaces to vegetated or other pervious surfaces;

10. activities that are considered temporary (eg) installation of monitoring wells, exploratory borings, sediment sampling, surveying;

11. planting of indigenous species of trees, shrubs, groundcover;

12. removal of dangerous or diseased trees.

4.03 Variances

(1) Criteria

The Conservation Commission may, in its discretion, grant variances for one or more of these regulations pursuant to this section. Such variances are intended to be granted only rarely and in accord with the provisions of this section.

A variance may be granted only for the following reasons and upon the following conditions:

(a) mitigating measures are proposed that will allow the project to be conditioned so that it contributes to the protection of the resource values identified in the Bylaw; and

(b) the Commission finds that no reasonable alternative for such a project within the proposed site; and

(c) the Commission finds that there will be no adverse impact from the proposed project; or

(d) the Commission finds that the project is necessary to accommodate an overriding public interest or to avoid a decision that so restricts the use of the property that it constitutes an unconstitutional taking without compensation.

(2) Provisions

Any project proponent seeking a variance must demonstrate that the project results in no adverse impacts to the interests defined under the Bylaw or that no feasible alternatives exist. To demonstrate there are no feasible alternatives and that the proposed project will result in no adverse impact to wetland resources, an alternatives analysis must be submitted as part of the variance request. The purpose of the alternatives analysis is to identify ways to locate and manage activities so that impacts to resources are minimized or avoided. Therefore, the alternatives analysis should include the assessment of impacts from the alternatives considered.

(3) Guidelines

(a) The scope of alternatives to be considered will be commensurate with the type and size of the proposed project. The alternatives analysis shall include the following:

1. a brief clear description of the project including the type, size and proposed use and the project objective;

2. a summary of alternatives to the proposed project;

3. a summary of potential environmental benefits of the project;

4. a summary of potential environmental adverse impacts of the project;

5. a list of any mitigation measures for the project; and

6. a timetable, approximate cost, and the methods and timing of the project and the alternatives.

(b) Alternatives should be considered in terms of the proposed use and objectives of the project. The analysis of alternatives should highlight potential differences of environmental impacts. This includes both short-term and long-term impacts as well as cumulative impacts.

The following are examples of the scope of alternatives for various projects:

1. Single family house project – the scope of alternatives will be limited to the lot for which the work is proposed, and include but not be limited to, house location, footprint size, proximity to resource area, options for replacing lost vegetative cover, vegetated buffer strip protection plan, etc.

2. Residential subdivision – the scope of alternatives will be limited to the original parcel and the subdivided parcels, and adjacent parcels, and any other land that can be reasonably obtained, and use of conservation restrictions to offset loss of natural habitat or open space.

3. Commercial development – the scope of alternatives is lots that can accommodate the project purpose, appropriately zoned, available for sale, within the town at the time of application, or if no such lot exists, a lot located in the market area that meets all other specifications. Offsetting use of conservation restrictions on part of the proposed development property, or voluntary commitment of other property for conservation may also be considered as mitigation.